

A strong negative linear relationship ($R^2=0.97$) existed between the mean one-day change in mean daily water temperature and storm intensity (Figure 49). Similarly, a strong negative quadratic relationship ($R^2=0.99$) was also observed for the maximum observed one-day change in mean daily water temperature (Figure 49). Decreases in mean daily water temperature less than or equal to -1.5°C were observed for 70% of hurricanes, 47-50% of tropical storms and tropical depressions, and 29% of extra-tropical systems examined. Overall, tropical systems accounted for less than 0.5% of these precipitous drops in mean daily water temperature ($\leq -1.5^\circ\text{C}$) between consecutive days in data sets collected at NERR SWMP sites between 1995-2000 (Figure 50).

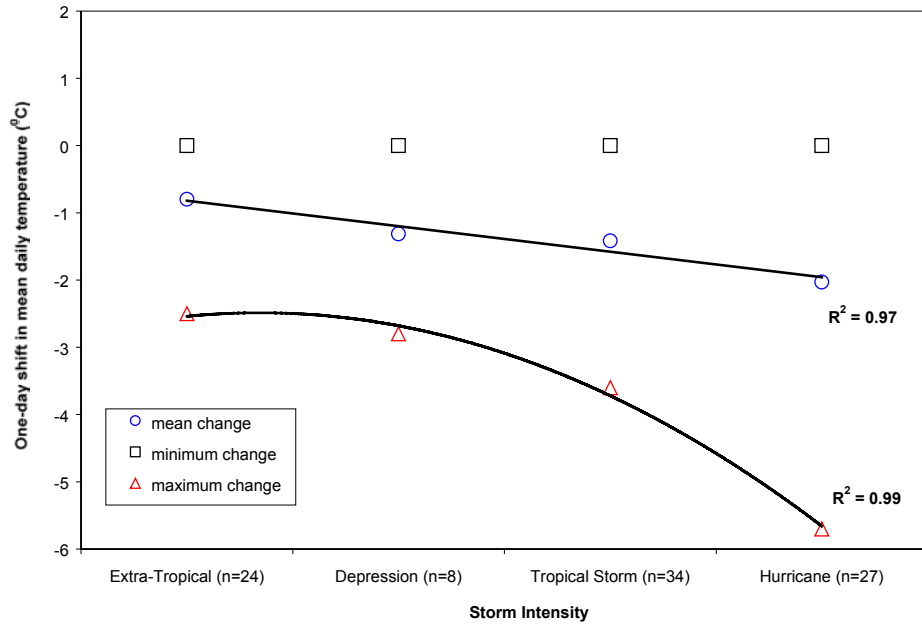


Figure 49. Storm intensity vs. one-day shift in mean daily water temperature.

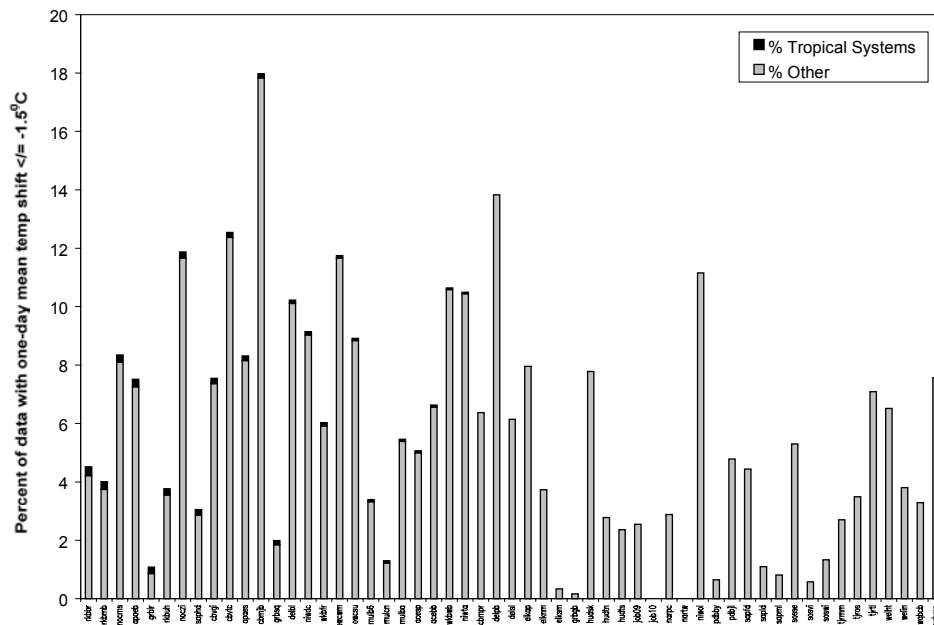


Figure 50. Frequency of one-day shifts in daily mean water temperature $\geq -1.5^\circ\text{C}$.